YASH GUPTE

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EDUCATION

MS in ECE Engineering
University of Colorado, Boulder
August 2018 – Present [Expected 2020]
Courses: 1. Principles of Embedded Software (PES)
2. Introduction to Power Electronics

BE in Electronics
D.J. Sanghvi College Of Engineering, Mumbai, India.
July 2013-August 2017
CGPA : 8.24/10

PROFESSIONAL EXPERIENCE

BETiC (IIT Bombay), Mumbai
August 2017-July 2018
Project Research Assistant
Biomedical engineering and technology incubation Centre (BETiC) in IIT Bombay is a **ISO 13485** certified lab facilitating rapid translation of innovative ideas from doctors into high-quality low-cost medical devices suitable for the local population. My roles involved:
- *Developing embedded systems*, Testing code and performing simulations, PCB Designing and milling, Soldering and Testing of circuits.
- *Mentoring* Medical Device competitions organized by BETiC.

RESEARCH PROJECTS

Diabetic Foot Screening Device [*Patent Pending*]
Sept 2017- Jan2018
Developed a Diabetic Foot Stiffness Device for sensing numbness in foot due to diabetic foot neuropathy, utilizing a **TI-MSP 432**(**Cortex M4**) for handling multiple Interrupts from controller, actuator and user button interface.
Python GUI was used to log data in an excel sheet.

Radial Pulse Screening Device
Feb 2018-June 2018
Developed a device to screen and record the waveforms of the radial pulse using microphones and filters which provide a screening of ailments in the human body.

ATMega328P was used for prototyping stage due to lower cost and enough sampling rate of 10khz**.**
Python was used to plot the waveforms of the recorded pulses.

TECHNICAL SKILLS

C|Python|Git|CCS|Kinetis|STM32|NXP|GCC|Linux| RaspberryPi|GDB|FTP|BLE|PSoC|IoT|Make|PCB Design|Altium|Mentor Graphics| PCB Milling|LPKF|Keil|OpenCV|UART|FunctionGenerators|Oscilloscopes|DMA|CUnit

ACADEMIC PROJECTS

Bluetooth Low Energy (BLE) entry registration system   June 2016-April 2017
Developed a BLE based device which uses BLE in phones of students to mark and record attendance in lectures.
Raspberry Pi recorded the data and provided it on a server via FTP for access from anywhere in local server. Implemented the above using Cypress Semiconductor *PSoC 4200 BLE board (Cortex M0*).

Embedded Command Line Interface
Sept 2018-Oct 2018
Interactive command-line interface with FRDMKL25Z. Involves dynamic memory operations such as allocate, store, invert and free memory.

Circular Buffer with custom UART drivers
Nov 2018
Implementation of Circular buffer with custom UART drivers and ISR. Based on the Freedom Board KL25Z. Also, involves TSI touch interface for user interaction.

Real Time ADC logging with DMA
Dec 2018
ADC paired with DMA for data storage without involvement of processor. Data is stored in double buffers for faster processing time.

Hammer Board
Sept 2018- Present
Developing a device to perform Load Testing on generic SMPS. Utilizing Mentor Graphics for PCB design.

CERTIFICATIONS AND COURSES

I. **ARM University Program Training Course** on Embedded System Design and Programming.
II. **Cypress University Alliance Training Program** on Internet of Things (**IoT**)
III. **Embedded Systems and Internet of Things (IoT)**
IV. Fundamentals of Audio and Music Engineering: Part 1: Musical and Sound Electronics from University Of Rochester via Coursera.

AWARDS

I. Stood **1st** in the **Medical Devices Hackathon** (**MEDHA 2017**) - A national level medical device innovation competition.
II. Secured **2nd** position in **Line Follower Competition** (Abhiyantriki 2015) at inter college level.